



ACTION CALENDAR
MARCH 8, 2022

To: Honorable Mayor and Members of the City Council

From: Councilmember Taplin, Councilmember Bartlett (co-sponsor), Councilmember Hahn (co-sponsor)

Subject: Equitable Safe Streets and Climate Justice Resolution

RECOMMENDATION

Adopt a resolution committing the expenditure of City and state/federal matching/recurring funds on city-maintained roads, sidewalks, and bike lanes to accelerate safety improvements in a manner consistent with City, State, and Federal policy on street safety, equity, accessibility, and climate change; refer to the City Manager to fully integrate Complete Streets design as defined by adoption of the NACTO Urban Street Design Guide in theas the default engineering standard for city streets; ~~restricting~~ city use of the Manual on Uniform Traffic Control Devices (MUTCD) to only documented cases that require its use for compliance with Federal/State regulations; in all other cases, restrict use of the MUTCD subject to "engineering judgment."; ~~and establish as City policy that the City of Berkeley shall hold harmless, and/or accept transfer of liability from, any City engineer/Public Works staff who face legal jeopardy due to approval and construction of safe streets under this item. transferring legal liability for safe streets designs from individual city engineering/Public Works staff to the City of Berkeley.~~

FINANCIAL IMPLICATIONS

According to the Federal Highway Administration:

"It is generally significantly less expensive to install safety improvements as part of a resurfacing project than to build it as a standalone project ... The cost for adding bike lanes during a resurfacing project costs approximately 40 percent of the cost of adding the lanes as a standalone project."¹

This resolution calls for the full integration of safety features at the time of re-paving of all streets in the city, in a manner consistent with City, State,² and Federal³ policy, which

¹ https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/resurfacing/page04.cfm#cost_a2

² "Caltrans to Require 'Complete Streets' Features in Planning and Design of All New Projects <https://dot.ca.gov/news-releases/news-release-2021-039>

³ Under the Infrastructure Investment and Jobs Act of 2021, "MPOs must use 2.5 percent of their overall funding to develop and adopt complete streets policies, active transportation plans, transit access plans, transit-oriented development plans, or regional intercity rail plans." <https://nacto.org/program/state-and-federal-policy/>

will result in substantial material and staff time savings, while also saving the lives of Berkeley residents.

CURRENT SITUATION AND ITS EFFECTS

Under current practices in Berkeley, safe streets interventions like bikeways, separated lanes, raised pedestrian crossings, and corner bulb-outs are often implemented only after a pedestrian or cyclist has been injured or killed by a driver. Many examples exist of streets that had been recently re-paved without safety features that were then re-designed after residents expressed their anger over pedestrians and cyclists being severely injured or killed by a driver.

According to the Federal Highway Administration, implementing safe streets features at the time of re-paving, rather than as stand-alone, post-facto projects, can significantly cut the costs of these safety interventions.⁴ This resolution calls for the full integration of safety features at the time of re-paving of all streets in the city, which will result in substantial material and staff time savings, while also saving the lives of Berkeley residents.

The Equitable Safe Streets and Climate Justice Resolution is a Strategic Plan Priority Project, advancing our goal to provide state-of-the-art, well-maintained infrastructure, amenities, and facilities.

BACKGROUND

Personal cars and trucks are the leading source of climate pollution in the City of Berkeley, causing 59% of all greenhouse gasses within city limits – more than all residential and commercial energy use, combined.⁵ They are also among the leading causes of violent injury and death in the city, with a growing number of deadly and injurious conflicts between people driving cars and vulnerable road users including pedestrians, the elderly, residents who use mobility devices, and bicyclists. Lower income Berkeley residents and people of color are disproportionately impacted by the risk of traffic injuries and fatalities.⁶

Berkeley also has among the highest percentages of people who take transit, walk, and ride bicycles of any city of its size in the United States.⁷ In spite of this fact, most of our streets are designed in such a way that makes them unsafe for pedestrians, transit users, or for use by people who use mobility devices or bicycles.

This disparity can be resolved through better engineering and design of our city streets, which will save lives and often result in substantial savings for the city. In addition, new

⁴ https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/resurfacing/page04.cfm#cost_a2

⁵ [https://www.cityofberkeley.info/Clerk/City_Council/2020/07_Jul/Documents/2020-07-21_Presentations_Item_5_\(6pm\)_Pres_CMO_pdf.aspx](https://www.cityofberkeley.info/Clerk/City_Council/2020/07_Jul/Documents/2020-07-21_Presentations_Item_5_(6pm)_Pres_CMO_pdf.aspx)

⁶ Berkeley Vision Zero Action Plan, March 10, 2019, page 13.

⁷ <https://www.vitalsigns.mtc.ca.gov/commute-mode-choice>

state legislation (AB-43, 2021) recognizes that high vehicle speeds are a primary factor in deadly and dangerous street conditions, and empowers California cities to lower speed limits on certain city streets to reduce traffic collisions and protect vulnerable road users.⁸

Recent History: Safety Measures Follow Tragedy, Increase Costs

According to the Federal Highway Administration:

“It is generally significantly less expensive to install safety improvements as part of a resurfacing project than to build it as a standalone project ... The cost for adding bike lanes during a resurfacing project costs approximately 40 percent of the cost of adding the lanes as a standalone project.”⁹

Over the past several years, safety conditions for Berkeley residents and visitors who do not drive have deteriorated, as evidenced by the growing number of crashes in Berkeley that have resulted in pedestrian and cyclist injury or death.¹⁰ In spite of the deaths and injuries on our streets, these crashes often do not result in safety improvements.

However, when local residents express sufficient outrage to City Hall over deadly conditions, the City sometimes rapidly responds with permanent or semi-permanent safety features – but had these features preceded, rather than followed, the crashes, they would have resulted in both lower costs to the city, and fewer traumatic injuries and deaths.

Examples of recent Berkeley street re-paving projects that led to increased costs due to a lack of safety features include:

- **Fulton (Oxford):** In 2015, Berkeley Public Works repaved Fulton/Oxford Street between Bancroft Way and Dwight, but did not add a safe bikeway as called for in Berkeley’s 2000 Bicycle Plan. Shortly afterward, Megan Schwarzman was hit and severely injured by a driver while bicycling.¹¹ After being pressured by the community to act, the City Council directed staff to re-stripe the roadway with a safer bikeway, adding 3 months of unplanned work and staff time. Costs would have been lower if the bikeway had been planned and implemented in a manner more consistent with existing city policy, and concurrent with re-paving.

⁸ Assembly Bill 43, Traffic Safety, 2021

https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=20212020AB43

⁹ https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/resurfacing/page04.cfm#cost_a2

¹⁰ <https://www.sfchronicle.com/local/article/Berkeley-bicycle-activist-struck-by-car-hours-16037329.php>

¹¹ Raguso, E. (2016). Bike lane opens by near-fatal crash site. *Berkeleyside*. Retrieved from <https://www.berkeleyside.org/2016/05/12/bike-lane-opens-in-berkeley-by-near-fatal-crash-site-no-charges-filed-yet-against-driver-who-police-say-was-high>

- **Hearst:** After adoption of the 2000 Berkeley Bicycle Plan, Berkeley Public Works repaved Hearst Avenue, but did not include a safe bikeway, as called for in the Bicycle Plan. After years of pressure from residents concerned about street safety, Berkeley finally rebuilt and repaved the street in 2016 with safer facilities, and at significant cost. Costs would have been lower if the bikeway had been planned and implemented in a manner consistent with existing city policy, and concurrent with re-paving.
- **Milvia Street:** Berkeley repaved Milvia Street downtown using Measure BB funds (2014), and then in 2019, repaved Milvia Street in south Berkeley. But neither repaving included safe streets interventions called for in the then-approved bike plans. Berkeley then added extensive safe bicycling facilities in 2021/2022. Costs would have been lower if the bikeway had been planned and implemented in a manner consistent with existing city policy, and concurrent with re-paving.
- **Dwight/California:** In 2021, Berkeley embarked on safety improvements at the corner of Dwight and California, a “bicycle boulevard” and a “safe route to school,” after local residents expressed outrage over two children who were struck by drivers on their way to school. California and Dwight Streets were re-surfaced in 2015, but did not include enhancements to improve pedestrian and cyclist crossing conditions at this intersection.
- **Concrete diagonal diverters:** Berkeley installed many concrete diagonal diverters back in the 1970’s, and had to come back later with separate concrete work to make bicycle cut-throughs in these diverters for bikes to access neighborhood streets. Costs would have been lower if the cut-throughs had been included in the original design.

Street Safety First: Berkeley City Policy

In recent years, the traffic engineering profession has developed extensive tools and engineering guidelines for cities that seek to safely meet the mobility needs of all residents, including those who drive cars, walk, use mobility devices, ride bicycles, and/or use transit.

Many of these new tools, such as the Urban Streets Design Guide by the National Association of City Transportation Officials (NACTO), provide turnkey solutions for cities seeking to design and engineer roads to improve street safety for all road users. The Design Guide was developed in part to help cities seeking to enhance safety, and in part out of growing concern over the proven inadequacy of the Federal Highway Administration’s Manual on Uniform Traffic Control Devices (MUTCD), which has led to dangerous and deadly conditions for vulnerable road users.¹²¹³¹⁴

¹² Schmitt, A. (2021). Let’s Throw Away These Rules of the Road. *Bloomberg*. Retrieved from <https://www.bloomberg.com/news/articles/2021-05-05/it-s-time-to-rewrite-the-road-builders-rule-book>

¹³ National Association of City Transportation Officials. (2021). 25,000 Comments Calling for Safety and Equity Reforms to Once-Obscure Federal Street Manual. *NACTO*. Retrieved from <https://nacto.org/2021/05/20/25000-comments-call-for-reforming-mutcd/>

¹⁴ Shill, G. & Bronin, S. (2021). Rewriting Our Nation’s Deadly Traffic Manual. *Harvard Law Review*. Retrieved from <https://harvardlawreview.org/2021/10/rewriting-our-nations-deadly-traffic-manual/>

In fact, in several cases, the proscriptions of the MUTCD have delayed or precluded street safety improvements in Berkeley.¹⁵ Part of the reason may be that, under current case law, engineers may sometimes be held personally liable for deaths or injuries that can be proven to be the result of street engineering and design.

Over the past year, both the Federal Highway Administration^{16,17} and Caltrans¹⁸ have issued guidance that allows city traffic engineers to use NACTO's Urban Streets Design Guide in place of the MUTCD for projects that use Federal or State transportation funds. In addition, FHWA has issued guidance that, in states where vulnerable road users make up 15% or more of the total number of fatalities in a state in a given year, the state is required to dedicate at least 15% of its Highway Safety Improvement Program funds the following fiscal year to projects that address the safety of these road users. Additionally, the new guidance incorporates legislative changes to permit 100% Federal funding for certain pedestrian and bicyclist projects.¹⁹

Adopt New Complete Streets Engineering Guidelines

This resolution directs all City departments with a role in the design, engineering, maintenance, and administration of Berkeley surface streets to formally adopt the NACTO Urban Streets Design Guide as the primary design and engineering manual for Berkeley city streets.

The resolution further directs all City departments to restrict use of the MUTCD, which has been proven to lead to unsafe street designs,²⁰ to only those projects where the Public Works Director certifies, in writing, that the MUTCD is better suited to achieving the City's goal of reducing vehicle speeds, enhancing safety features for pedestrians, cyclists, and people who use mobility devices, and ending traffic conflicts between cars and other road users.

In all cases where the MUTCD must be used, all City departments shall first exercise "engineering judgment," as defined in the MUTCD, to ensure safe street designs, including such judgment as may result in modification or overruling of MUTCD standards. In cases where "engineering judgment" can not be used to reduce vehicle speeds or otherwise enhance street safety conditions for all road users, all City departments shall issue formal findings, approved by the Public Works director, that

¹⁵ Harrington, T. (2021). Berkeley's plans to make Dwight and California safer get mixed reviews. *Berkeleyside*. Retrieved from <https://www.berkeleyside.org/2021/05/16/berkeley-plans-to-make-dwight-and-california-safer-get-mixed-reviews>

¹⁶ "National Roadway Safety Strategy," US Department of Transportation, Jan 2022 <https://www.transportation.gov/NRSS>

¹⁷ "Bicycle and Pedestrian Facility Design Flexibility," US Department of Transportation - FHWA, Aug 2013 https://www.fhwa.dot.gov/environment/bicycle_pedestrian/guidance/design_flexibility.cfm

¹⁸ "Caltrans to Require 'Complete Streets' Features in Planning and Design of All New Projects," Dec 20, 2021 <https://dot.ca.gov/news-releases/news-release-2021-039>

¹⁹ https://safety.fhwa.dot.gov/hship/rulemaking/docs/BIL_HSIP_Eligibility_Guidance.pdf

²⁰ See footnote 12.

document why a street can not be made safe for all road users, and vehicle speed and throughput must be prioritized.

The resolution directs city departments to ensure that all requests for funding related to any project, on any surface street, sidewalk, bicycle facility, or other transportation infrastructure within city borders, prioritize and implement designs that ensure the safety of vulnerable users who are not in private automobiles, as established in numerous past policy directives of the Berkeley City Council.²¹

This resolution further prohibits all City departments from spending any city financial resources on any street that does not include the “best in class” design for Complete Streets unless the safety benefits are outweighed by other considerations, ~~all of which are fully documented in a transparent manner for legal review, and approved by the Public Works Director.~~

It further prohibits City departments from requiring traffic studies or other measurements related to impacts on “Level of Service” (vehicle speed/throughput) in consideration of street safety improvements, if such improvements will either a) improve safe travel conditions for vulnerable road users, or b) reduce Vehicle Miles Traveled, as established by State of California²² and City of Berkeley climate and land use policies, or c) if such improvements are otherwise consistent with guidance in the Complete Streets provisions of NACTO and Caltrans.

It further directs all departments to maintain the priority of street safety interventions in situations where budget is a limiting factor in street repair/improvements, by prioritizing the use of “quick build”²³ approaches which improve street safety via rapidly-deployed, lower-cost, temporary measures. ~~In such cases, the Public Works Director will provide the City with a memo explaining the budget shortfall and define a process for closing the funding gap to install permanent safety features when funds become available; or if City departments demonstrate, via appropriate studies and documentation approved by the Public Works Director, an urgent need to complete such repairs/improvements without temporary or permanent safety interventions.~~

²¹ e.g. Berkeley Bicycle Plan, 2017; Berkeley Pedestrian Plan, 2020; BIBMBAP [[https://www.cityofberkeley.info/Clerk/City_Council/2019/10_Oct/Documents/2019-10-29_Item_31_Referral_Develop_a_Bicycle_Lane_-_Rev_\(2\).aspx](https://www.cityofberkeley.info/Clerk/City_Council/2019/10_Oct/Documents/2019-10-29_Item_31_Referral_Develop_a_Bicycle_Lane_-_Rev_(2).aspx)]; Berkeley Pedestrian Safety Report 1998; Downtown Area Plan, 2012; West Berkeley Plan, 1993; Adeline Corridor Specific Plan (in progress); University Avenue Plan, 1996.

²² California Senate Bill 743, passed in 2013, mandates that jurisdictions can no longer use automobile delay – commonly measured by Level of Service (LOS) – in transportation analysis under the California Environmental Quality Act (CEQA). Full implementation was delayed until 2019. [<https://www.vta.org/projects/level-service-los-vehicle-miles-traveled-vmt-transition>]

²³ “Quick build” projects are reversible, adjustable traffic safety improvements that can be installed relatively quickly. Unlike major capital projects that may take years to plan, design, bid and construct, quick-build projects are constructed within weeks or months and are intended to be evaluated and reviewed within the initial 24 months of construction. [<https://www.sfmta.com/vision-zero-quick-build-projects>]

~~Finally, this resolution establishes that it is the policy of the City of Berkeley to prioritize human lives and safety over the speed and convenience of private automobiles and, as such, in cases where the city engineering staff's approved safe street designs are found to be at fault for damages from a crash, the city will accept legal and financial responsibility for such damages should a court of law so find, and release engineering staff from any personal or professional liability.~~

~~The resolution finally establishes, as a matter of policy, that spending City funds to repair a damaged car is always the preferred outcome to spending city resources on the medical bills or death expenses of any non-motorist road user in the City of Berkeley.~~

Definitions:

- **Complete Streets:** On December 11, 2012, Berkeley City Council adopted a Complete Streets Policy (Resolution 65,978-N.S.) to guide future street design and repair activities. "Complete Streets," describes a comprehensive, integrated transportation network with infrastructure and design that allows safe and convenient travel along and across streets for all users, including pedestrians, bicyclists, persons with disabilities, motorists, movers of commercial goods, users and operators of public transportation, emergency vehicles, seniors, children, youth, and families.²⁴
- **NACTO Urban Street Design Guide:** An engineering manual for cities that adopt Complete Streets policies.
- **Level of Service (LOS):** A discontinued method of evaluating transportation infrastructure projects based on vehicle speed and throughput; SB 743, passed in 2013, prohibited LOS in CEQA analysis in the State of California, but the law is under-enforced and LOS is still commonly used.
- **Vehicle Miles Traveled (VMT):** A measure of the impact of car use on air quality and street safety based on the number of miles traveled by car. It is long-standing policy of the City of Berkeley and the State of California to reduce VMT to achieve climate and safe streets policies.
- **MUTCD:** The Manual on Uniform Traffic Control Devices. This controversial manual has been blamed for dangerous street designs throughout the United States. Federal and State transportation authorities are in the process of revising it, and have encouraged jurisdictions that seek to accelerate progress on safe streets to use other engineering and street design guidelines.

ENVIRONMENTAL SUSTAINABILITY AND CLIMATE IMPACTS

While cars represent the majority of the climate pollution within the city at 59%, Berkeley also has a very high mode share²⁵ among residents and visitors who walk, ride transit, use mobility devices, and ride bicycles. These modes of travel are the lowest-carbon

²⁴ <https://www.cityofberkeley.info/completestreetspolicy/>

²⁵ https://www.cityofberkeley.info/uploadedFiles/Public_Works/Level_3_-_Transportation/Berkeley-Bicycle-Plan-2017-Executive%20Summary.pdf

options available, and the City has many policies focused on incentivizing and increasing their use.

However, abundant research about mode choice shows that people hesitate to shift to more sustainable forms of mobility in areas with deadly and dangerous car traffic – which describes most of the City of Berkeley.²⁶

In addition to having a high mode share for non-car modes, Berkeley also has among the highest rates, per capita, of traffic violence involving people not in cars. The correlation is direct: Our unsafe streets are harming people, and preventing the city from achieving its goals on both climate action, and safe mobility.

CONTACT PERSON

Councilmember Taplin Council District 2 510-981-7120

ATTACHMENTS

1. Resolution
2. City of Palo Alto resolution adopting the NACTO Urban Bikeway Design Guide
3. City of Oakland Public Works Director letter of endorsement of NACTO Urban Street Design Guide
4. Assembly Bill 43 (2021)

²⁶ Raguso, E. (2020). Berkeleyside interactive maps: Cyclist and pedestrian injury crashes in 2019. *Berkeleyside*. Retrieved from <https://www.berkeleyside.org/2020/01/28/berkeleyside-interactive-maps-cyclist-and-pedestrian-injury-crashes-in-2019>

RESOLUTION NO. ##,###-N.S.

EQUITABLE SAFE STREETS AND CLIMATE JUSTICE RESOLUTION

WHEREAS, Berkeley's climate action plan calls for an 80% reduction in climate pollution by 2050, and private automobiles represent 59% of the City's climate pollution; and

WHEREAS, progress on Berkeley's climate action plan will depend in large part on reducing "vehicle miles traveled," or the amount people drive private cars within city limits; and

WHEREAS, Berkeley's bicycle plan proposed in 1971 called for a city-wide network of safe bicycle routes; and

WHEREAS, Berkeley adopted an action plan for Vision Zero in 2019; and

WHEREAS, Berkeley's existing policy on street engineering and safety calls for "Complete Streets" as defined by the National Association of City Transportation Officials (NACTO); ~~and~~

~~WHEREAS, the overwhelming majority of Berkeley's streets, traffic signals, intersections, and related transportation infrastructure have been designed, engineered, and maintained for the priority of automobile speed/"Level of Service" above safe travel options for people who walk, take transit, use mobility devices, or ride bicycles; and~~

~~WHEREAS, the city follows the inadequate, outdated and discredited guidance of the Manual on Uniform Traffic Control Devices in determining appropriate street safety designs; and~~

~~WHEREAS, some case law suggests that engineers are, on occasion, held personally liable for street designs they have approved in their professional capacity;~~

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NOW THEREFORE, BE IT RESOLVED by the City Council of the City of Berkeley that any and all funds ~~generated or otherwise allocated by the City and its voters via taxes, bonds, state/federal grants, and other revenues~~ that are to be used for the design of major roadway projects such as roadway reconstruction/repaving of more than one city block~~design, engineering, construction, and maintenance~~ of city streets and related facilities shall only be disbursed for projects that fully integrate Complete Streets (as defined by NACTO) and all feasible safety interventions designed to reduce automobile speed and protect the lives of people outside of automobiles;

BE IT FURTHER RESOLVED that in all cases where Complete Streets can not be fully implemented, or in cases where the MUTCD must be used in place of the NACTO Urban

Streets Design Guide, City Staff shall use “engineering judgment” to prioritize the safety of vulnerable road users, and not rely on MUTCD “warrants” and other proscriptions;

~~BE IT FURTHER RESOLVED that in all cases where the MUTCD must be used, and where “engineering judgment” can not be used to reduce vehicle speeds or otherwise enhance street safety conditions for all road users, all City departments shall issue formal findings, approved by the Public Works director, that document why a street can not be made safe for all road users, and vehicle speed and throughput must be prioritized;~~

BE IT FURTHER RESOLVED that pursuant to AB-43 (2021), no city official shall apply the “85th percentile” rule in the process of setting speed limits on city streets, but rather, determine via safety studies and other documented engineering findings by the Public Works Director, when higher speeds are appropriate and are the safest option for all road users, provided however, that all criteria for setting local speed limits set forth in the California Vehicle Code, including Sections 22358.6 to 22358.9, are complied with in setting speed limits, even if inconsistent with this clause.;

~~BE IT FURTHER RESOLVED that it is the policy of the City of Berkeley that, should a court of law find the city legally liable for any damages that result from a driver crashing into a “safe street” intervention under this resolution, the City of Berkeley shall assume liability, and not city traffic engineering or public works staff; and that accepting legal and financial liability for such damages are the City’s preferred alternative to traffic fatalities and injuries on our streets.~~